

REMARKS

Applicants respectfully request entry of the foregoing and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.116, and in light of the remarks which follow.

Claims 15-22, 24-25 and 29-33 are pending in the application, claims 26-28 and 34-37 having been cancelled above without prejudice to or disclaimer of the subject matter therein.

By the above amendments, Applicants amended claim 15 to further clarify that the prepared pearl is a spherical article with its largest dimension being less than or equal to 15 mm. Support for this amendment can be found at least at page 3, lines 24-27 of the specification. Applicants also cancelled claims 26-28 and 34-37 without prejudice or disclaimer because the Official Action has designated these claims as being withdrawn from consideration for being directed to non-elected subject matter. A claim that has been amended in a manner that does not narrow the claim's scope should be accorded its full range of equivalents.

Entry of this Amendment is proper under 37 C.F.R. § 1.116 because the Amendment places the application into condition for allowance (for the reasons discussed herein), or places the application into better form for appeal, should an appeal be necessary. The Amendment does not raise the issue of new matter and does not raise issues requiring additional search and/or consideration since the Amendment is directed to subject matter previously considered during prosecution. In particular, the only substantive change to the pending claims was previously considered in the previous Official Action. (See claim 15, as amended above, and the December 10, 2009, Official Action at page 6.) Also, the remarks presented

below supplement those presented in Applicants' earlier responses and are presented here in further response to issues raised in the final rejection. Applicants respectfully request entry of the Amendment without the need for filing of a Request for Continued Examination (RCE).

Applicants thank the Examiner for considering Applicants' Amendment of September 17, 2009. In particular, Applicants thank the Examiner for withdrawing the objection to claim 30 in view of Applicants' prior amendments and/or remarks. For at least the reasons that follow, Applicants respectfully submit that all pending claims in the application are in condition for allowance.

Turning now to the Official Action, claims 15, 18, 21, 24, 25 and 30-33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Bruning* (U.S. Patent No. 6,315,931). For at least the reasons that follow, withdrawal of the rejection is in order.

Independent claim 15, as amended above, recites a process for preparing a pearl based on expanded polymer and having a continuous skin, the process comprising the following successive steps:

- a) extruding an expandable composition comprising a thermoplastic polymer and an expanding agent, in molten state, to effect expansion thereof, and
- b) cooling using a liquid and chopping the expanded material thus obtained, wherein the step of cooling and chopping is performed at the die outlet and wherein the prepared pearl is a spherical article with its largest dimension being less than or equal to 15mm. (Emphasis added.)

Bruning relates to a method for producing a foamed granulate, wherein in a thermoplastic synthetic material is placed in an extruder, this synthetic material is

melted, and a pressurized expanding agent is fed through one or several injection nozzles and the molten material enriched with the expanding agent is foamed as it exits through a perforated plate arranged at the outlet of the extruder and is granulated by a cutting machine arranged behind the perforated plate. (*See Bruning* at column 1, lines 4-11.)

It is well-established that in order to demonstrate anticipation under § 102(b), each feature of the claim at issue must be found, either expressly described or under principles of inherency, in a single prior art reference. (*See Verdegaal Bros. v. Union Oil Company of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).) That is not case here.

In particular, the presently claimed process includes steps (a) and (b), namely, extruding an expandable composition comprising a thermoplastic polymer and an expanding agent, in molten state, to effect expansion thereof, and cooling using a liquid and chopping the expanded material thus obtained, wherein the cooling and chopping is performed at the die outlet, respectively. In addition, claim 15 further clarifies that the prepared pearl is a spherical article with its largest dimension being less than or equal to 15 mm.

Applicants respectfully submit that *Bruning*, therefore, cannot anticipate the process of claim 15 because *Bruning* does not, expressly or inherently, describe each feature in the combination of features defined in claim 15.

For example, the Official Action acknowledges at page 6 that *Bruning* does not disclose or fairly suggest a produced pearl that is a spherical article with its largest dimension being less than or equal to 15 mm. In addition, Applicants submit that *Bruning* describes producing a foamed granulate, as explained in the Abstract,

at column 2, lines 27, 35 and 62 and at column 3, lines 11 and 31. The granulates of *Bruning* are obtained by foaming of the polymer material in a manner wherein the polymer comes into contact with water in an underwater pelletizer system (see *Bruning* at column 1, line 66, column 2, lines 25-27 and column 2, lines 36-41). Accordingly, Applicants submit that *Bruning* is specifically focused on the foaming of polymer in water for the purpose of obtaining granulates without crater-shaped fissures. In contrast, the claimed process includes step (a) (expansion of the polymer) and step (b) (cooling and chopping the expanded material). Accordingly, in the claimed process, foaming occurs in step (a) when the polymer is in the extruder, not in water, as in *Bruning*. This is a significant difference in the process steps and leads to different granulate forms, as Applicants have previously explained.

For at least these reasons, Applicants respectfully submit that the process of claim 15 is patentable over *Bruning*. The remaining claims, claims 18, 21, 24, 25 and 30-33 all depend, directly or indirectly, from claim 15. Accordingly, these claims are also patentable over *Bruning* for at least the reasons that claim 15 is patentable.

Applicants respectfully request reconsideration and withdrawal of the § 102(b) rejection of claims 15, 18, 21, 24, 25 and 30-33 over *Bruning*.

Claims 16, 17, 20, 22 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bruning* in view of *Pontiff* (EP 0 450 205). Likewise, claim 19 stands rejected under § 103 over *Bruning* in view of *Amano* (U.S. Patent No. 5,234,640). For at least the reasons that follow, withdrawal of the rejections is in order.

Claim 15 is recited above. Each of the above-rejected dependent claims depends, directly or indirectly, from independent claim 15 and, therefore, necessarily includes each feature in the combination of features recited in claim 15.

Bruning is described above.

Pontiff relates to a process for producing shrunken moldable beads of foamed thermoplastic polymers, e.g., polyolefins and particularly beads of crosslinked polyolefins. (See *Pontiff* at page 1, lines 5-10.)

Amano relates to a process for providing a thermoplastic polyester series resin foamed material or molding thereof. (See *Amano* at column 1, lines 5-8.)

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claimed features. (See, *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).) In addition, "all words in a claim must be considered in judging the patentability of that claim against the prior art." (See, *In re Wilson*, 424 F.2d 1382, 1385; 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).) (See, also M.P.E.P. § 2143.03). Applicants submit that these requirements have not been met.

For example, for at least all of the reasons presented in detail above, *Bruning* does not teach or suggest all of the features of claim 15, which are necessarily present in each of the above-rejected claims that are directly or indirectly dependent on claim 15.

As a result, the recited combinations of cited references also do not reflect a proper consideration of "all words" in claim 15, which are also necessarily present in the rejected dependent claims. For example, Applicants submit that *Bruning* does not disclose or fairly suggest the combination of features recited in claim 15

including, *inter alia*, expansion step (a) and cooling and chopping step (b) or a prepared pearl that is a spherical article with its largest dimension being less than or equal to 15 mm, as recited in claim 15. Applicants submit that the secondary references *Pontiff* and *Amano* do not overcome these deficiencies of *Bruning*.

Accordingly, Applicants respectfully submit that the recited combinations of *Bruning* in view of *Pontiff* and *Bruning* in view of *Amano* do not teach or suggest all of the claimed features and do not provide proper consideration of “all words” in claim 15 in judging the patentability of the rejected dependent claims against the cited prior art references.

Applicants also submit that in establishing a *prima facie* case of obviousness, the Patent Office must provide reasons *why* one of ordinary skill would have been led to modify the prior art reference or combine reference teachings to arrive at the claimed subject matter. Applicants submit that in the present case, no such factors or motivation for combining *Bruning* and *Pontiff* or *Bruning* and *Amano* exists. In particular, the Official Action does not provide adequate information to support the position that it would have been obvious to modify the different processes of *Bruning* for producing foam granulates to include the combination of features recited in claim 15, which includes the particular sequence of steps (a) and (b) and produces a pearl that is a spherical article with its largest dimension being less than or equal to 15 mm. That is, while *Bruning* is focused on forming granulates by foaming the polymer via contact with water and an underwater pelletizer system, nothing in any of the cited references, alone or in combination, discloses or fairly suggests modifying such a process to include the steps of claim 15 or to produce a pearl that is a spherical

article having its largest dimension being less than or equal to 15 mm, as recited in claim 15.

For at least these reasons, claims 16-17, 20, 22 and 29 are patentable over *Bruning* in view of *Pontiff* and claim 19 is patentable over *Bruning* in view of *Amano*. Reconsideration and withdrawal of the § 103(a) rejections are respectfully requested.

From the foregoing, Applicants earnestly solicit further and favorable action in the form of a Notice of Allowance.

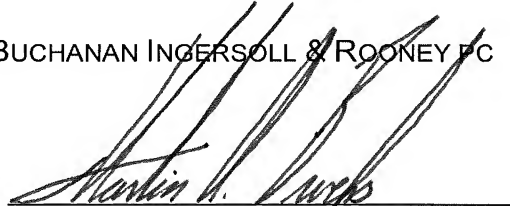
If there are any questions concerning this paper or the application in general, Applicants invite the Examiner to telephone the undersigned at the Examiner's earliest convenience.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: May 10, 2010

By:

A handwritten signature in black ink, appearing to read "Martin A. Bruehs", is written over a horizontal line.

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